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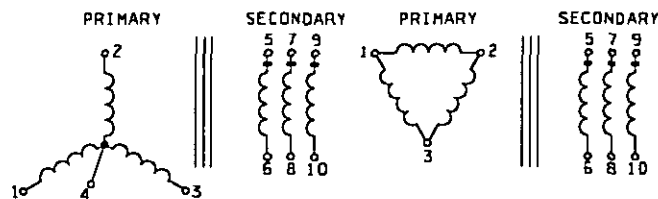
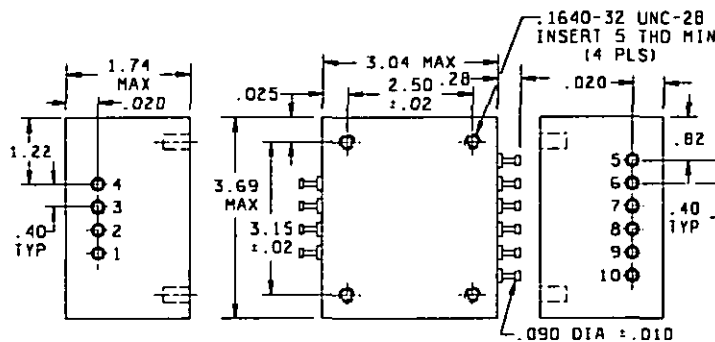
MIL-PRF-27/347B
17 January 1986
SUPERSEDING
MIL-T-27/347A
5 March 1984

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 200 VOLTAMPERES, 3-PHASE, TYPE TF5S03YY

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the transformer described herein shall consist of this specification and the latest issue of MIL-T-27.



(For dash numbers 01 through 07)
PRIMARY (For dash nos. 01 thru 07)
WYE, 115 V to Com 1,2,3 Line 4 Com
WYE, 200 V L-L 1,2,3

(For dash numbers 08 through 21)
SECONDARY
WYE, L Com Connect 6-8-10 Load 5-6, 7-6, 9-6
DELTA, L-L Connect 6-7,8-9 5-10 Load 5,7,9
WYE, L-L Connect 6-10, 8-10 Load 5,7,9

INCH	mm
.010	0.25
.02	0.5
.090	2.29
.164	4.17
.20	5.1
.25	6.4
.28	7.1
.40	10.2
.82	20.8
1.22	31.0
1.74	44.2
2.30	58.4
2.84	72.1
3.15	80.0
3.69	93.7

PRIMARY (For Dash nos. 08 thru 14)
DELTA, 115 V L-L 1,2,3

PRIMARY (For Dash nos. 15 thru 21)
DELTA, 200 V L-L 1,2,3

CIRCUIT DIAGRAMS

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .04$ (1.0 mm).
4. Marking shall be on top and side of case.
5. Terminal 4 is missing for dash nos. 08 thru 21.

FIGURE 1. Dimensions and configuration.

Dielectric withstanding voltage (Secondary connected Wye).

At atmospheric pressure (each winding) 1500 V rms.

At barometric pressure (each winding) 670 V rms.

Electrical characteristics.

Rated load: With rated voltage across the primary at 400 Hz, the voltage across each winding of the secondary, wye connected, shall be as specified in table I within ± 5 percent at the current specified in table I.

Regulation: Shall not exceed 10 percent when computed as follows

$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$

TABLE I. Electrical rating - secondary.

Dash numbers M27/347-	Wye (L-Com) 4 wire 1/ Delta (L-L) 3 wire 2/ (each winding)		Wye (L-L) 3 wire 3/ (each winding)		DC resistance 1/ Wye (L-Com) (each winding)
	Load current		Load current		
	<u>Volts</u> <u>rms</u>	<u>Amperes</u> <u>rms</u>	<u>Volts</u> <u>rms</u>	<u>Amperes</u> <u>rms</u>	<u>Ohms ±25%</u>
01, 08, 15	5	13.34	8.66	7.70	.00447
02, 09, 16	12	5.56	20.8	3.21	.0210
03, 10, 17	15	4.45	26.0	2.57	.0333
04, 11, 18	20	3.34	34.6	1.93	.0699
05, 12, 19	28	2.38	48.5	1.38	.124
06, 13, 20	48	1.39	83.1	0.81	.424
07, 14, 21	115	0.58	200	0.34	2.04

1/ Wye, line to common, connect (6-8-10), load (5-6), (7-6), and (9-6).

2/ Delta, line to line, connect (6-7), (8-9), and (5-10), load (5-7-9).

3/ Wye, line to line, connect (6-10), (8-10), load (5-7-9)

Efficiency (at rated load) Shall be a minimum of 90 percent when computed as follows with secondary connected wye, L-Com:

$$\frac{(\text{Secondary voltage}) (\text{Secondary current})}{(\text{Primary phase voltage}) (\text{Primary phase current})} \times 100$$

DC resistance (dash numbers 01 through 07).

Primary.

(1-4) 1.68 ohms ± 25 percent.

(2-4) 1.68 ohms ± 25 percent.

(3-4) 1.68 ohms ± 25 percent.

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DC Resistance (dash numbers 08 through 14)

Primary:

(1-4): 1.11 ohms \pm 25 percent.

(2-4): 1.11 ohms \pm 25 percent.

(3-4): 1.11 ohms \pm 25 percent.

DC resistance (dash numbers 15 through 21)

Primary.

(1-4): 3.10 ohms \pm 25 percent.

(2-4): 3.10 ohms \pm 25 percent.

(3-4): 3.10 ohms \pm 25 percent.

Secondary: See table I.

Temperature rise 50°C with rated voltage and current at 400 Hz, the secondary shall be wye connected at an ambient temperature of 80°C.

Shock (specified pulse): MIL-STD-202, method 213.

Marking location See figure 1.

Part number. M27/347-(dash number from table I).

QUALIFICATION DATA:

Qualification testing and approval to M27/344-07 and M27/349-18 shall be sufficient to grant qualification approval to MIL-T-27/344 through MIL-T-27/349.

Qualification testing and approval to M27/347-21 shall be sufficient to grant qualification approval to M27/347-01 through M27/347-21.

Revision letters are not used to denote changes due to the extensiveness of the changes.

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities

Army - MI
Navy - OS
Air Force - 11, 17, 99
DLA - ES

User activities:

Army - ME
Navy - AS, MC
Air Force - 19

Preparing activity:

Army - ER

Agent.

DLA - ES

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